Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of analyzing a fluid sample for at least one analyte, comprising the steps of:

providing a flow cell having a sensing surface;

providing a laminar flow of a first sensitizing fluid and a laminar flow of a second fluid adjacent to the flow of the first sensitizing fluid such that the two laminar fluids flow together over the sensing surface with an interface to each other~~, at least the first sensitizing fluid being capable of sensitizing the sensing surface~~;

adjusting the relative flow rates of the first sensitizing fluid and the second fluid to position the interface such that the first sensitizing fluid contacts a discrete sensing area of the sensing surface for selective sensitization thereof to generate a sensitized sensing area;

providing a laminar flow of a second sensitizing fluid and a laminar flow of a third fluid adjacent to the flow of the second sensitizing fluid such that the two laminar fluids flow together over the sensing surface transversely to the direction of the first sensitizing fluid with an interface to each other;

adjusting the relative flow rates of the second sensitizing fluid and the third fluid to position the interface such that the second sensitizing fluid overlaps with the sensing area sensitized by the first sensitizing fluid for selective re-sensitization of the overlapping area by the second sensitizing fluid to generate an overlapping sensitized sensing area sequentially sensitized by the first and second sensitizing fluids;

contacting at least the overlapping sensitized sensing area with the fluid sample; and

detecting interaction between the at least one analyte of the fluid sample and the overlapping sensitized sensing area.

2-4. (Canceled)

5. (Currently Amended) The method according to claim 1 wherein an additional laminar flow of a fourth fluid is provided on the other side of the flow of the first sensitizing fluid so that the laminar flow of the first sensitizing fluid is sandwiched between the laminar flows of the second and fourth fluids~~the relative flow rates of the laminar flows are continuously varied to provide a continuous gradient sensitized area on the sensing surface~~.

6. (Currently Amended) The method according to claim 1 wherein an additional laminar flow of a fifth ~~third~~ fluid is provided on the other side of the flow of the second ~~first~~ sensitizing fluid so that the laminar flow of the second ~~first~~ sensitizing fluid is sandwiched between the laminar flows of the third ~~second~~ and fifth ~~third~~ fluids.

7. (Canceled)

8. (Currently Amended) The method according to claim 1 wherein sensitization of the sensing surface comprises immobilizing a ligand to the sensing surface~~7 wherein the method is repeated with at least one different sensitizing first fluid and with varied relative flow rates of the second and third fluids to provide at least two adjacent sensitized surface areas on the sensing surface~~.

9. (Currently Amended) The method according to claim 8 ~~1~~ wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is ~~sensitization of the sensing surface comprises immobilizing~~ an analyte-specific ligand ~~to the sensing surface~~.

10. (Original) The method according to claim 9 wherein the analyte-specific ligand is selected from the group consisting of antigen, antibody, antibody fragment, oligonucleotide, carbohydrate, oligosaccaride, receptor, receptor fragment, phospholipid, protein, hormone, avidin, biotin, enzyme, enzyme substrate, enzyme inhibitor and organic synthetic compound.

11. (Canceled)

12. (Currently Amended) The method according to claim 1 ~~11~~ wherein the first sensitizing fluid sensitizes an area on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluid to yield at least two overlapping sensitized areas on the sensing surface.

13. (Currently Amended) The method according to claim 1 ~~11~~ wherein at least two different first sensitizing fluid sensitized at least two parallel areas on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluid to yield a matrix of overlapping sensitized areas on the sensing surface.

14. (Currently Amended) The method according to claim 8 ~~11~~ wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is an analyte-specific ligand.

15. (Original) The method according to claim 14 wherein the analyte-specific ligand is selected from the group consisting of antigen, antibody, antibody fragment, oligonucleotide, carbohydrate, oligosaccaride, receptor, receptor fragment, phospholipid, protein, hormone, avidin, biotin, enzyme, enzyme substrate, enzyme inhibitor and organic synthetic compound.

16. (Currently Amended) The method according to claim 8 ~~11~~ wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is a bi-functional ligand.

17-18. (Canceled)

19. (Previously Presented) The method according to claim 1 wherein at least one non-sensitized area on the sensing surface is used as a reference.

20. (Previously Presented) The method according to claim 1 wherein at least one sensitized area on the sensing surface is used as a reference.

21-44. (Canceled)

45. (Currently Amended) The method according to claim 1, wherein the fluid sample is selectively contacted with the discrete sensitized sensing area by passing the fluid sample through the flow cell under laminar flow conditions with a sixth ~~fourth~~ fluid, wherein selective contact of the fluid sample with a sensitizing sensing area is controlled by adjusting the relative flow rates of the fluid sample and the sixth ~~fourth~~ fluid.

46. (Canceled)

47. (Currently Amended) The method according to claim 45, wherein the fluid sample passes through the flow cell under laminar flow conditions with the sixth ~~fourth~~ fluid, and further with a seventh ~~fifth~~ fluid located on the other side of the flow of the sample fluid so that the laminar flow of the sample fluid is sandwiched between the sixth ~~fourth~~ and seventh ~~fifth~~ flows.

48. (Currently Amended) The method according to claim 45, wherein the relative flow rates of the sample fluid and the sixth ~~fourth~~ flow are adjusted to bring the sample fluid into contact with a discrete sensing area that was not previously in contact with the sample fluid.

49. (Canceled)

50. (New) A method of sensitizing a sensing surface arranged to be passed by a liquid flow within a flow cell, comprising:

providing a laminar flow of a first sensitizing fluid and a laminar flow of a second fluid adjacent to the flow of the first sensitizing fluid such that the two laminar fluids flow together over the sensing surface with an interface to each other;

adjusting the relative flow rates of the first sensitizing fluid and the second fluid to position the interface such that the first sensitizing fluid contacts a discrete sensing area of the sensing surface for selective sensitization thereof to generate a sensitized sensing area;

providing a laminar flow of a second sensitizing fluid and a laminar flow of a third fluid adjacent to the flow of the second sensitizing fluid such that the two laminar fluids flow together over the sensing surface transversely to the direction of the first sensitizing fluid with an interface to each other;

adjusting the relative flow rates of the second sensitizing fluid and the third fluid to position the interface such that the second sensitizing fluid overlaps the sensing area sensitized by the first sensitized fluid for selective re-sensitization of the overlapping area by the second sensitizing fluid to generate an overlapping sensitized sensing area sequentially sensitized by the first and second sensitizing fluids.

51. (New) The method according to claim 50, wherein an additional laminar flow of a fourth fluid is provided on the other side of the flow of the first sensitizing fluid so that the laminar flow of the first sensitizing fluid is sandwiched between the laminar flows of the second and fourth fluids.

52. (New) The method according to claim 51, wherein an additional laminar flow of a fifth fluid is provided on the other side of the flow of the second sensitizing fluid so that the laminar flow of the second sensitizing fluid is sandwiched between the laminar flows of the third and fifth fluids.

53. (New) The method according to claim 50, wherein the first sensitizing fluid sensitizes an area on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluid to yield at least two overlapping sensitized areas on the sensing surface.

54. (New) The method according to claim 50, wherein at least two different first sensitizing fluids sensitized at least two parallel areas on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluids to yield a matrix of overlapping sensitized areas on the sensing surface.

55. (New) The method according to claim 50, wherein sensitization of the sensing surface comprises immobilizing a ligand to the sensing surface.

56. (New) The method according to claim 55, wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is an analyte-specific ligand.

57. (New) The method according to claim 56, wherein the analyte-specific ligand is selected from the group consisting of antigen, antibody, antibody fragment, oligonucleotide, carbohydrate, oligosaccharide, receptor, receptor fragment, phospholipid, protein, hormone, avidin, biotin, enzyme, enzyme substrate, enzyme inhibitor and organic synthetic compound.

58. (New) The method according to claim 55, wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is a bi-functional ligand.